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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/593,498 | 09/20/2006 | Yoshihiro Saida | Q83507 | 1660 |
| 23373 7590 12/11/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | | |
| EXAMINER MC GINTY, DOUGLAS J | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1796 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 12/11/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/593,498

Applicant(s)

SAIDA ET AL.

Examiner

DOUGLAS MC GINTY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
4a) Of the above claim(s) 7-12, 15, 17, 18 and 23 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6, 13, 14, 16, 19-21 and 24-41 is/are rejected.
7) ☒ Claim(s) 22 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 20 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9-20-06
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION***Election/Restrictions***

Applicant's election with traverse of the species of Formula (1), as set forth in claim 6, in the reply filed on October 31, 2008 is acknowledged.

The Applicants traverse on the grounds that claims 7 and 8 are narrower than claim 6 because those claims depend from claim 6 and because Formulae (2) and (3) in claims 7 and 8 are within the scope of Formula (1) in claim 6. The Applicants further argue that similar reasoning applies to claim 15. These arguments are not persuasive. Neither Formula (2) of claim 7 nor Formula (3) of claim 8 has the $\text{Ar-B}^2\text{-SO}_2\text{-B}^1$ - structure found in Formula (1). Specifically, the monovalent Ar- of Formula (1) in claim 6 is not found in either Formula (2) or Formula (3) of claim 7 or 8.

The claims are not examined prior to making the species election requirement. For species election purposes, therefore, no determination is made as to whether there is proper antecedent basis for the limitations in a dependent claim.

Upon further consideration, however, Formula (7) of claims 13, 14, 16, and 19 is not considered to involve a sufficiently distinct species from Formula (1) in claim 6. The M^+ in Formula (7) may include a quaternary ammonium ion. Such ions may be monovalent Ar groups. See p. 28, lines 2-17, of the present specification.

The requirement is still deemed proper with the above modification and is therefore made FINAL. Claims 1-6, 13, 14, 16, 19-21, and 24-41 are examined

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herein as drawn to the elected species. Claims 7-12, 15, 17, 18, and 23 are withdrawn from further consideration as drawn to non-elected species.

Claim Objection

Claim 22 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not depend from two claims at the same time. See MPEP § 608.01(n). Accordingly, the claim 22 has not been further treated on the merits.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

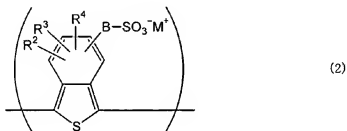
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6, 13, 14, 16, 19, 20, 21, and 24-41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being

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unpatentable over claims of copending Application No. 11/657,550 (see US 2007/0181857) in view of Saida (US 5,648,453).

Claim 19 in the other application recites an electroconductive polymer of the following formula:



(in the formula, R^2 to R^4 each independently represents a hydrogen atom, a linear or branched, saturated or unsaturated hydrocarbon group having 1 to 20 carbon atoms, a linear or branched, saturated or unsaturated alkoxy group having 1 to 20 carbon atoms, a hydroxyl group, a halogen atom, a nitro group, a cyano group, a trihalomethyl group, a phenyl group, a substituted phenyl group or $-B-SO_3^-M^+$ group; B represents $-(CH_2)_p-(O)_q-(CH_2)_r-$, p and r each independently represents 0 or an integer of 1 to 3, and q represents 0 or 1; M^+ represents a hydrogen ion, an alkali metal ion or a quaternary ammonium ion);

Formula (1) in present claim 6 reads on the $-B-SO_3^-$ portion of the above formula when B_2 has the value of 1 for q and the value 0 for both p and r.

The claims in the other application do not recite that M^+ is a monovalent Ar group.

Nevertheless, Saida teaches electroconductive polymers overlapping the formula found in claim 19 of the other application (Abstract). The M^+ in Saida may include one of many monovalent Ar groups (col. 5, lines 24-29). The

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examples in that reference teach different processes for making and applying the polymer. The self-doping function and various uses are taught at col. 29, lines 4-20.

It would have been obvious for the electroconductive polymer of the claim 19 in the other application to include a monovalent Ar group, as taught by Saida, because both the claims of the other application and the teachings of Saida pertain to electroconductive polymers. "The combination of familiar [components] according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Intern. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007). Obviousness only requires a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988). See also, MPEP 2143.02.

It is noted that the M^{*} in claim 19 of the other application and the teachings of Saida is an ion. As explained above, however, Formula (1) in present claim 6 can have the -B-SO₃- portion and Saida teaches a monovalent Ar group for M^{*}. The conditions for the presently claimed invention are met, regardless of whether the bond between those components is ionic or covalent.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

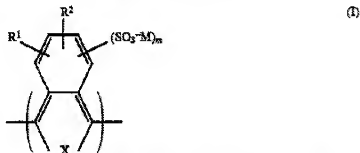
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6, 13, 14, 16, 19, 20, 21, and 24-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saida (US 5,648,453).

Saida teaches electroconductive polymers of the following formula in the Abstract:

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Electroconductive polymers having a chemical structure represented by, for example, the formula (I)



wherein R^1 and R^2 independently represent H, a C_1 to C_{20} alkyl or alkoxy group, an amino group, a trihalomethyl group or a phenyl group, X represents S, O, Se, Te or NR_3 , R_3 represents H, a C_1 to C_6 alkyl group or an aryl group, M represents a cation such as M^+ , an alkali metal ion or a quaternary ammonium ion, and m is 0.2 to 2 and a process for producing the polymer.

Saida meets the B^1 and B^2 limitations of Formula (1) in present claim 6 when the p, q, and r values are all 0 for both B^1 and B^2 in that Formula (1). The M^+ may include one of many monovalent Ar groups (col. 5, lines 24-29). The examples in that reference teach different processes for making and applying the polymer. The self-doping function and various uses are taught at col. 29, lines 4-20.

Saida does not appear to teach the particular Formula (1) of present claim 6.

Nevertheless, Saida teaches a genus encompassing the presently claimed species.

It would have been obvious for self-doped electroconductive polymers to have the structure of Formula (1) in present claim 6. One skilled in the art would

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have looked to the teachings of Saida because that reference teaches the use of self-doping polymers for similar uses. The structure of the monomer units are very similar between the present claims and the reference. The monovalent Ar group also was one of the limited number of choices for M^+ in that reference. Based on the teachings of the reference as a whole, therefore, the presently claimed formula is found to have been obvious. See MPEP 2144.08.

It is noted that the M^+ in the teachings of Saida is an ion. As explained above, however, Formula (1) in present claim 6 can have the $-B-SO_3^-$ portion and Saida teaches a monovalent Ar group for M^+ . The conditions for the presently claimed invention are met, regardless of whether the bond between those components is ionic or covalent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS MC GINTY whose telephone number is (571)272-1029. The examiner can normally be reached on M-F, 830-500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DOUGLAS MC GINTY/
Primary Examiner, Art Unit 1796